AMENDMENTS TO THE CLAIMS

This listing will replace all prior versions, and listings, of claims, in the application:

Listing of Claims:

1. – 12. (Canceled)

13. (Withdrawn) A susceptometer as claimed in one or more of the preceding claims, characterized in that it has a support structure for the magnetic field source/s (2, 2' and small magnet) and the pick-ups (4, 4' 6, 6'), including an upright (21), wherefrom three cantilevers (22) project at different heights and in substantially aligned positions to support the magnetic field source/s (2, 2'and small magnet) and the pick-ups (4, 4'; 6, 6') respectively.

14. (Withdrawn) A susceptometer as claimed in claim 13, characterized in that the upright (21) and/or the cantilevers (22) are provided as tubular or box-like elements, like panels, and may be removably fastened together by locking and/or centering means.

15. (Withdrawn) A susceptometer as claimed in claim 12 or 13, characterized in that the cantilevers (22) are joined to the upright by means of extensions of their vertical side walls, which have the form of fastening tabs, abutting against the corresponding side walls of the upright (21) and secured thereto by means of fast pins and dowels (23,24).

16. (Withdrawn) A susceptometer as claimed in one or more of the preceding claims 12 to 15, characterized in that the cantilevers (22) have cavities for receiving the pick-up/s (4, 4'; 6, 6') and the magnetic field source/s (2, 2'and small magnet) respectively, which cavities are formed within the thickness of said cantilevers.

17. (Withdrawn) A susceptometer as claimed in one or more of the preceding claims 12 to 16, characterized in that the pick-up/s and the magnetic field source/s are secured inside the thickness of the cantilevers (22) by dowels (222) and fast pins (322).

18. (Withdrawn) A susceptometer as claimed in one or more of the preceding claims 12 to 17, characterized in that the lower end upon which the upright rests, is connected to a base plate by means of trapezoidal reinforcement plates (25), which are fastened to said base (26) and to the side walls of the upright (21)

19. (Withdrawn) A susceptometer as claimed in one or more of the preceding claims 12 to 18, characterized in that the support structure (20) with the pick-ups (4, 4'; 6, 6') and with the magnetic field source/s (2, 2' and small magnet) are accommodated in a first inner shell (30), which has a cavity (130) for housing the upright (21) which cavity communicates with three cavities for housing the cantilevers (22), the lower portion of the first cavity (130) being widened to form a trapezium which corresponds to the trapezoid base (25) of the support structure (20).

20. (Withdrawn) A susceptometer as claimed in claim 19, characterized in that the assembly composed of the support structure (20) with the pick-ups (4, 4'; 6, 6') and with the magnetic field source/s (2,2' and small magnet) and its first inner shell (30) are accommodated in a second outer shell (31), whose shape corresponds to that of the first inner shell (30), and whose size is larger to form a salable gap, through which a diathermic fluid may flow for temperature stabilization purposes.

21. (Withdrawn) A susceptometer as claimed in one of claims 19 or 20, characterized in that the first inner shell has two tubular supporting beams (32) along the side walls, at the trapezoidal widened base.

22. (Withdrawn) A susceptometer as claimed in claim 21, characterized in that the two tubular support beams (32) also act as inlets and outlets for the diathermic fluid flowing in the gap between the inner shell (30) and the outer shell (31).

23. (Withdrawn) A susceptometer as claimed in one or more of the preceding claims 12 to 22, characterized in that it is provided in combination with a patient table, a stretcher, or the like (40), whose patient supporting surface (43) is supported in such a manner as to be able to move vertically between the two operating positions in which the body to be screened is introduced, between the cantilever that supports the magnets (2, 2') and the

cantilever of upper pick-ups (4, 4') and between the cantilever that supports the magnets (2, 2') and the cantilever (22) of lower pick- ups (6, 6') respectively.

24. (Withdrawn) A susceptometer as claimed in claim 23, characterized in that the patient supporting surface has a cavity for accommodating the cantilever (22) that supports the lower pick-up/s (6, 6') and/or the cantilever (22) that supports the magnetic field source/s (2, 2').

25. (Withdrawn) A susceptometer as claimed in claim 23 or 24, characterized in that the patient table or stretcher (40) has a base (41) that runs on rails.

26. (Withdrawn) A susceptometer as claimed in one or more of claims 23 to 25, characterized in that the body supporting surface (43) may be lifted or lowered with respect to the base (41), thanks to a jointed arm lifting system (42) and removable position lock means.

27. (Withdrawn) A susceptometer as claimed in one or more of the preceding claims, characterized in that it has three magnetic field sources (2, 21 and small magnet) each being able to generate different magnetic field flux distributions.

28. (Withdrawn) A susceptometer as claimed in claim 27, characterized in that two pick-ups (4, 4'; 6, 6') are provided on each side of the magnetic field sources (2, 2'), each being dimensionally adapted to the volume permeated by the magnetic flux of the corresponding magnetic field source (2, 2').

29. (Withdrawn) A susceptometer as claimed in one or more of the preceding claims 28 to 28, characterized in that it has two magnetic field sources (2, 2'), formed by annular circular coils, which have different diameters, one being contained in the other, and are coaxial to each other and to the two pick-ups (4, 4'; 6, 6'), the latter being themselves provided as coils, one in the other and coaxial to each other, the size of concentric coils (4, 4'; 6, 6') being adapted to the size of the corresponding magnetic field source (2, 2').

30. (Withdrawn) A susceptometer as claimed in one or more of the preceding claims, characterized in that an additional magnetic field source is associated to each pick-up or pick-up pair (4, 4'; 6, 6').

31. (Withdrawn) A susceptometer as claimed in claim 30, characterized in that said magnetic field source has an annular shape and is mounted coaxially inside the smaller pick-up of each pick-up pair (4, 4'; 6, 6').

32. – 41. (Canceled)

42. (New) A susceptometer for non-invasive iron level measurement in a body comprising:

a first heat insulating case comprising a support structure, the first case being made of a non-magnetic and essentially insulating material;

an alternating magnetic field source generating a magnetic field within the first case, the source being supported by the structure;

a first and a second magnetic field sensors supported by the structure and disposed on opposite sides of the source, a first screening region being interposed between the source and the first sensor and a second screening region being interposed between the source and the second sensor, the temperature within the first and the second screening regions being controlled by limiting variations of the temperature to a predetermined maximum value;

means for disposing the body within the first or the second screening region; and

means for processing electric signals perceived by the first or second sensors, the signals being indicative of a variation in the magnetic field caused by the body in the first or second screening regions.

43. (New) The susceptometer of claims 42, wherein the first and the second sensors are disposed symmetrically with respect to the source.

44. (New) The susceptometer of claim 42, further comprising a third sensor disposed between the source and the first sensor and a fourth sensor disposed between the source and the fourth sensor, the first screening region being interposed between the first and the third sensor and the second screening region being interposed between the second and the fourth sensors.

45. (New) The susceptometer of claim 42, further comprising a second heat insulation case disposed around the first heat insulating case.

46. (New) The susceptometer of claim 45, wherein the means for disposing the body comprise a first and a second tunnels, wherein the first and the second tunnels have insulating non-magnetic walls, and wherein the first and the second tunnels each include at least one opening for introducing the body.

47. (New) The susceptometer of claim 46, wherein the temperature is controlled by providing a plurality of heating/cooling members coupled to the first and the second tunnels and by further providing temperature sensors for sensing the temperature, and wherein the temperature is adjusted by the heating and cooling members according to measurements by the temperature sensors.

48. (New) The susceptometer of claim 42, wherein the temperature is controlled by providing a plurality of heating/cooling members coupled to the first case and by further providing temperature sensors for sensing the temperature, and wherein the temperature is adjusted by the heating and cooling members according to measurements by the temperature sensors.

49. (New) The susceptometer of claim 48, wherein the heating and cooling members have weak magnetic properties.

50. (New) The susceptometer of claim 45, wherein the temperature is controlled by providing a plurality of heating/cooling members coupled to the first and/or to the second case.

51. (New) The susceptometer of claim 42, wherein the means for processing electric signals comprise a lock-in amplifier configured for reading the electric signals, and wherein the signals are null if no sample is introduced in the first and the second screening regions.

52. (New) The susceptometer of claim 51, wherein the means for processing further comprise a computer configured for acquiring an output signal of the amplifier in synchronism with the introduction and extraction of the sample from the first or second screening regions.

53. (New) The susceptometer of claim 45, wherein the first case and the second case define a liquid gap therebetween, wherein a diathermic fluid flows through the liquid gap, thereby stabilizing the temperature within the first and the second screening regions.